Exploring Aeronautics			
2009 Science			
Standards			
Oregon Science			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	OR	SCI.5.5.3S.1	Based on observations and science principles, identify questions that can be tested, design an experiment or investigation, and identify appropriate tools. Collect and record multiple observations while conducting investigations or experiments to test a scientific question or hypothesis.
Wings(177-208)	OR	SCI.5.5.4D.2	Design and build a prototype of a proposed engineering solution and identify factors such as cost, safety, appearance, environmental impact, and what will happen if the solution fails.
Airplane Control(209-256)	OR	SCI.5.5.4D.2	Design and build a prototype of a proposed engineering solution and identify factors such as cost, safety, appearance, environmental impact, and what will happen if the solution fails.
Tools of Aeronautics(257-326)	OR	SCI.5.5.4D.1	Using science principles describe a solution to a need or problem given criteria and constraints.
The Tools of Aeronautics	OR	SCI.5.5.4D.1	Using science principles describe a solution to a need or problem given criteria and constraints.
Intro to Aeronautics (109-123)	OR	SCI.5.5.3S.3	Explain the reasons why similar investigations may have different results.
Intro to Aeronautics (109-123)	OR	SCI.5.5.4D.1	Using science principles describe a solution to a need or problem given criteria and constraints.
Scientific Method(124-144)	OR	SCI.5.5.3S.1	Based on observations and science principles, identify questions that can be tested, design an experiment or investigation, and identify appropriate tools. Collect and record multiple observations while conducting investigations or experiments to test a scientific question or hypothesis.
Scientific Method(124-144)	OR	SCI.5.5.3S.2	Identify patterns in data that support a reasonable explanation for the results of an investigation or experiment and communicate findings using graphs, charts, maps, models, and oral and written reports.
Scientific Method(124-144)	OR	SCI.5.5.3S.3	Explain the reasons why similar investigations may have different results.
Exploring Aeronautics			
2009 Science			
Standards			
Oregon Science			

Grade 6			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	OR	SCI.6.6.3S.2	Organize and display relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions.
Fundamentals of Aeronautics (145-176)	OR	SCI.6.6.3S.3	Explain why if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one variable.
Wings(177-208)	OR	SCI.6.6.4D.2	Design, construct, and test a possible solution to a defined problem using appropriate tools and materials. Evaluate proposed engineering design solutions to the defined problem.
Airplane Control(209-256)	OR	SCI.6.6.4D.2	Design, construct, and test a possible solution to a defined problem using appropriate tools and materials. Evaluate proposed engineering design solutions to the defined problem.
Science of Flight	OR	SCI.6.6.3S.1	Based on observations and science principles, propose questions or hypotheses that can be examined through scientific investigation. Design and conduct an investigation that uses appropriate tools and techniques to collect relevant data.
Intro to Aeronautics (109-123)	OR	SCI.6.6.3S.3	Explain why if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one variable.
Scientific Method(124-144)	OR	SCI.6.6.3S.1	Based on observations and science principles, propose questions or hypotheses that can be examined through scientific investigation. Design and conduct an investigation that uses appropriate tools and techniques to collect relevant data.
Scientific Method(124-144)	OR	SCI.6.6.3S.2	Organize and display relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions.
Scientific Method(124-144)	OR	SCI.6.6.3S.3	Explain why if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one variable.
Scientific Method(124-144)	OR	SCI.6.6.4D.2	Design, construct, and test a possible solution to a defined problem using appropriate tools and materials. Evaluate proposed engineering design solutions to the defined problem.
Exploring Aeronautics			
2009 Science			
Standards			
Oregon Science			
Grade 7			
Activity/Lesson	**State**	**Standards**	

Fundamentals of Aeronautics (145-176)	OR	SCI.7.7.2P.1	Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.
Fundamentals of Aeronautics (145-176)	OR	SCI.7.7.3S.2	Organize, display, and analyze relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions including possible sources of error.
Wings(177-208)	OR	SCI.7.7.2P.1	Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.
Wings(177-208)	OR	SCI.7.7.4D.2	Design, construct, and test a possible solution using appropriate tools and materials. Evaluate the proposed solutions to identify how design constraints are addressed.
Airplane Control(209-256)	OR	SCI.7.7.2P.1	Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.
Airplane Control(209-256)	OR	SCI.7.7.4D.1	Define a problem that addresses a need and identify constraints that may be related to possible solutions.
Airplane Control(209-256)	OR	SCI.7.7.4D.2	Design, construct, and test a possible solution using appropriate tools and materials. Evaluate the proposed solutions to identify how design constraints are addressed.
Tools of Aeronautics(257-326)	OR	SCI.7.7.4D.2	Design, construct, and test a possible solution using appropriate tools and materials. Evaluate the proposed solutions to identify how design constraints are addressed.
How an Airplane Flies	OR	SCI.7.7.2P.1	Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.
The Activity Center	OR	SCI.7.7.2P.1	Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.
Science of Flight	OR	SCI.7.7.3S.1	Based on observations and science principles, propose questions or hypotheses that can be examined through scientific investigation. Design and conduct a scientific investigation that uses appropriate tools and techniques to collect relevant data.
Science of Flight	OR	SCI.7.7.3S.3	Evaluate the validity of scientific explanations and conclusions based on the amount and quality of the evidence cited.
Science of Flight	OR	SCI.7.7.4D.1	Define a problem that addresses a need and identify constraints that may be related to possible solutions.
Science of Flight	OR	SCI.7.7.4D.2	Design, construct, and test a possible solution using appropriate tools and materials. Evaluate the proposed solutions to identify how design constraints are addressed.

Integrating with Aeronautics	OR	SCI.7.7.2P.1	Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.
Integrating with Aeronautics	OR	SCI.7.7.3S.2	Organize, display, and analyze relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions including possible sources of error.
Intro to Aeronautics (109-123)	OR	SCI.7.7.2P.1	Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.
Intro to Aeronautics (109-123)	OR	SCI.7.7.3S.1	Based on observations and science principles, propose questions or hypotheses that can be examined through scientific investigation. Design and conduct a scientific investigation that uses appropriate tools and techniques to collect relevant data.
Scientific Method(124-144)	OR	SCI.7.7.2P.1	Identify and describe types of motion and forces and relate forces qualitatively to the laws of motion and gravitation.
Scientific Method(124-144)	OR	SCI.7.7.3S.1	Based on observations and science principles, propose questions or hypotheses that can be examined through scientific investigation. Design and conduct a scientific investigation that uses appropriate tools and techniques to collect relevant data.
Scientific Method(124-144)	OR	SCI.7.7.3S.2	Organize, display, and analyze relevant data, construct an evidence-based explanation of the results of an investigation, and communicate the conclusions including possible sources of error.
Scientific Method(124-144)	OR	SCI.7.7.3S.3	Evaluate the validity of scientific explanations and conclusions based on the amount and quality of the evidence cited.
Scientific Method(124-144)	OR	SCI.7.7.4D.2	Design, construct, and test a possible solution using appropriate tools and materials. Evaluate the proposed solutions to identify how design constraints are addressed.
Exploring Aeronautics			
2009 Science			
Standards			
Oregon Science			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	OR	SCI.8.8.3S.2	Organize, display, and analyze relevant data, construct an evidence-based explanation of the results of a scientific investigation, and communicate the conclusions including possible sources of error. Suggest new investigations based on analysis of results.

Wings(177-208)	OR	SCI.8.8.4D.2	Design, construct, and test a proposed engineering design solution and collect relevant data. Evaluate a proposed design solution in terms of design and performance criteria, constraints, priorities, and trade-offs. Identify possible design improvements.
Science of Flight	OR	SCI.8.8.3S.1	Based on observations and science principles, propose questions or hypotheses that can be examined through scientific investigation. Design and conduct a scientific investigation that uses appropriate tools, techniques, independent and dependent variables, and controls to collect relevant data.
Science of Flight	OR	SCI.8.8.4D.1	Define a problem that addresses a need, and using relevant science principles investigate possible solutions given specified criteria, constraints, priorities, and trade-offs.
Science of Flight	OR	SCI.8.8.4D.2	Design, construct, and test a proposed engineering design solution and collect relevant data. Evaluate a proposed design solution in terms of design and performance criteria, constraints, priorities, and trade-offs. Identify possible design improvements.
Intro to Aeronautics (109-123)	OR	SCI.8.8.4D.1	Define a problem that addresses a need, and using relevant science principles investigate possible solutions given specified criteria, constraints, priorities, and trade-offs.
Scientific Method(124-144)	OR	SCI.8.8.3S.1	Based on observations and science principles, propose questions or hypotheses that can be examined through scientific investigation. Design and conduct a scientific investigation that uses appropriate tools, techniques, independent and dependent variables, and controls to collect relevant data.
Scientific Method(124-144)	OR	SCI.8.8.3S.2	Organize, display, and analyze relevant data, construct an evidence-based explanation of the results of a scientific investigation, and communicate the conclusions including possible sources of error. Suggest new investigations based on analysis of results.
Scientific Method(124-144)	OR	SCI.8.8.4D.2	Design, construct, and test a proposed engineering design solution and collect relevant data. Evaluate a proposed design solution in terms of design and performance criteria, constraints, priorities, and trade-offs. Identify possible design improvements.